

METHOD AND APPARATUS FOR FABRICATING
COMPLEX GRATING STRUCTURES

ABSTRACT OF THE DISCLOSURE

An imprint lithography method provides a negative image of a pattern formed in a fixed medium on a mechanically flexible imprint master. A substrate includes a deformable material formed over the substrate surface to be patterned. The fixed medium of the imprint master contacts with the substrate to cause the deformable material to deform and contour to the negative image of the pattern of the fixed medium. The imprint master is decoupled from the substrate after the pattern formed in the deformable material is solidified. With the solidified pattern formed on the substrate, the substrate is then patterned by etching or other means.

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